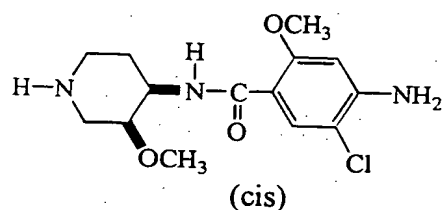


CLAIMS

1. A process for preparing (+)-norcisapride base of formula

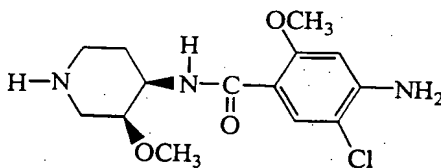


characterized by

- a) separating the enantiomers of cis-ethyl 4-(4-amino-5-chloro-2-methoxy-benzoylamino)-3-methoxy-1-piperidine carboxylate by liquid chromatography over a chiral stationary phase, and
- b) isolating the fraction having a specific rotation $[\alpha]_D^{20}$ in methanol that is dextrorotatory, and
- c) solvolysing said fraction to (+)-norcisapride.
2. A process according to claim 1 wherein the chiral stationary phase is a cellulose or amylose polysaccharide.
3. A process according to claim 2 wherein the eluent is a mixture of hexane and an alcohol.
4. A process according to claim 1 wherein solvolysis comprises hydrolysis in a basic aqueous medium.
5. (+)-Norcisapride obtainable by a process of any of claims 1 to 4.
6. A compound according to claim 5 containing at least 90 % by weight of the (+)-stereoisomer and 10 % by weight or less of the (-)-stereoisomer.
7. A compound according to claim 5 containing more than 99 % by weight of the (+)-stereoisomer.
8. (+)-Norcisapride according to claim 5 substantially free of its (-)-stereoisomer.
9. (+)-Norcisapride having a specific rotation $[\alpha]_D^{20}$ in methanol that is dextrorotatory

10. (+)-Norcisapride having a specific optical rotation $[\alpha]_D^{20}$ of about $+5.60^\circ$ ($c = 1\%$ w/v in methanol).

5 11. (+)-Norcisapride having the absolute configuration of (3S,4R)



(3S,4R)-*cis*-4-amino-5-chloro-2-methoxy-*N*-(3-methoxy-4-piperidiny)benzamide.

12. A pharmaceutically acceptable acid addition salt of a compound according to any of claims 5 to 11.

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13. A pharmaceutical composition comprising a pharmaceutically acceptable carrier, and as active ingredient a therapeutically effective amount of a compound as described in any one of claims 5 to 12.

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14. A process for preparing a pharmaceutical composition as claimed in claim 13 wherein a therapeutically effective amount of a compound as defined in any one of claims 5 to 12 is intimately mixed with a pharmaceutically acceptable carrier.

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15. A method of treating gastro-intestinal disorders in a warm-blooded animal associated with an overstimulation of the 5-HT₃-receptor activity which comprises administering to said warm-blooded animal a therapeutically effective amount of a compound as defined in any of claims 5 to 12.

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16. A method of treating gastro-intestinal disorders in a warm-blooded animal associated with an understimulation of the 5-HT₄-receptor activity which comprises administering to said warm-blooded animal a therapeutically effective amount of a compound as defined in any of claims 5 to 12.

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17. A method of treating gastro-intestinal disorders in a warm-blooded animal which are simultaneously associated with an understimulation of the 5-HT₄-receptor activity and an overstimulation of the 5-HT₃-receptor activity which comprises administering to said warm-blooded animal a therapeutically effective amount of a compound as defined in any of claims 5 to 12.

18. A method according to any of claims 14 to 17 while avoiding central nervous system effects.
- 5 19. A method of treating 5-HT₃-mediated disorders while substantially avoiding central nervous system effects in a warm-blooded animal which comprises administering to said warm-blooded animal a therapeutically effective amount of a compound as defined in any of claims 5 to 12.
- 10 20. A method of claim 19 wherein the disorder is irritable bowel syndrome or diarrhea-predominant irritable bowel syndrome.
21. A method of claim 19 wherein the disorder is cytotoxic drug emesis or radiation induced emesis.
- 15 22. A method of treating eating disorders in a warm-blooded animal which comprises administering to said warm-blooded animal a therapeutically effective amount of a compound as defined in any of claims 5 to 12.
- 20 23. A method of claim 22 wherein the eating disorder is anorexia.
24. A method of accelerating intestinal cleansing in a warm-blooded animal which comprises administering to said warm-blooded animal a therapeutically effective amount of a compound as defined in any of claims 5 to 12 and a laxative.
- 25 25. A method of claim 24 wherein the laxative is an osmotic agent.
26. A method of claim 24 wherein the laxative is a polyethylene glycol (PEG)-electrolyte solution.
- 30 27. A method of treating 5-HT₄-mediated disorders while substantially avoiding central nervous system effects in a warm-blooded animal which comprises administering to said warm-blooded animal a therapeutically effective amount of a compound as defined in any of claims 5 to 12.
- 35 28. A method of claim 27 wherein the disorder is hampered or impaired gastrointestinal transit.

29. A method of claim 27 wherein the disorder is hampered or impaired gastric emptying.
30. A method of claim 27 wherein the disorder is gastro-oesophageal reflux.
31. A method of claim 27 wherein the disorder is dyspepsia or gastroparesis.
32. Compounds of formula (V) wherein the piperidine ring has the absolute configuration (3S,4R) and PG is methyloxycarbonyl, ethyloxycarbonyl, *tert*-butyloxycarbonyl or phenylmethyl.

